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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,768	08/06/2001	Edward G. Callway	00100.00.0820	9391
29153 7590 08/20/2008 ADVANCED MICRO DEVICES, INC. C/O VEDDER PRICE P.C. 222 N.LASALLE STREET CHICAGO, IL 60601				
EXAMINER VAN HANDEL, MICHAEL P				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/923,768

Applicant(s)

CALLWAY ET AL.

Examiner

MICHAEL VAN HANDEL

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/02/2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-20 and 24-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-20, 24-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/88)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date: _____

DETAILED ACTION

Miscellaneous

1. As noted in the response received 6/02/2008, the Office Action mailed 12/31/2007 contained a typographical error. The applicant was correct in assuming that, although not noted in the heading under 35 U.S.C. § 102(e), claim 20 was rejected under 35 U.S.C. § 102(e) as noted in the body of the rejection. The examiner apologizes for any inconvenience.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/02/2008 has been entered.

Response to Amendment

1. This action is responsive to an Amendment filed 6/02/2008. Claims **15-20, 24-29** are pending. Claims **20, 28, 29** are amended. Claims **1-14, 21-23, 30** are canceled. The examiner hereby withdraws the objections to claims **28** and **29** in light of the amendment.

Response to Arguments

1. Applicant's arguments regarding claims **15**, **20**, **24**, and **26-29**, filed 6/02/2008, have been fully considered, but they are not persuasive.

Regarding claim **20**, the applicant argues that the claim language is being given an improper interpretation. The applicant specifically argues that motion vectors are not the ordinary meaning of "graphics drawing commands" and that one of ordinary skill in the art would not interpret motion vectors to be "graphics drawing commands." The examiner respectfully disagrees. As noted in the Office Action mailed 12/31/2007, Hannah discloses that motion vectors are stored in video encoding to describe how a video receiver should render an image. Hannah illustrates this in the example of compressing a motorcyclist object 174c in a sequence of video frames. Since the motorcyclist image is likely to move to a different set of macroblocks in successive frames of the image, a macroblock 172 of a video frame 170 may be compared to macroblocks 172 in both previous frames and subsequent frames, looking for a matching image, such as the motorcyclist object 174c. Once found, a representation of the movement of the object, known as a motion vector, may be stored in lieu of a complete representation of the movement of the object 174c (col. 4, l. 44-52 & Fig. 2). Thus, the examiner interprets "motion vectors" to be graphics drawing commands, because objects within video are moved and rendered based on the motion vectors. The examiner notes that "[d]uring patent examination, the pending claims must be 'given their broadest reasonable interpretation consistent with the specification.'" The "PTO applies to verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in applicant's

specification.” “Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified.” See **MPEP 2111**.

Further regarding claim **20**, the applicant argues that the Hannah reference does not support this interpretation of “graphics drawing commands.” The examiner respectfully disagrees. The applicant specifically argues that Hannah does not teach that the enhancement block processes motion vectors; however, in the rejection of claim 20 in the Office Action below, the examiner interprets the first processor to be the decoder 102 of Hannah. Hannah discloses that the decoder 102 receives an encoded video data stream 110, such as one received from remote transmission site, decompresses the video data stream, resulting in a reproduced image stream, and extracts a plurality of motion vectors from the stream that were created at the remote transmission site during the encoding process (col. 2, l. 38-40, 43-44, 57-61). The motion vectors 118, which include information about the relative positions of image objects between frames of the video image, are sent from the decoder 102 to the encoder 106 (col. 2, l. 61-65). Hannah also discloses that, in a video image where simple offsets to the video image are added by the enhancement block, the bulk of the motion vectors 118 may be unaffected (col. 6, l. 58-60). Thus, these motion vectors are the same as those decoded by the decoder and are combined with the enhanced data stream for transmission to the remote display. As such, the examiner maintains that Hannah meets the limitations of claim 20.

Still further regarding claim **20**, the applicant argues that the Hannah reference itself contradicts the Office Action’s interpretation, because the Hannah reference distinguishes between graphics drawing commands and motion vectors as being different pieces of data and

different information. The examiner respectfully disagrees. The examiner notes that, despite Hannah disclosing “high-level display lists of commands” for creating “graphic elements,” this does not restrict motion vectors from being graphics drawing commands as well. Graphics drawing commands are instructions for causing a computer to create or manipulate an object on a screen. As such, the examiner maintains that motion vectors are “graphics drawing commands,” as currently claimed.

Regarding claims **15-19**, for clarification sake, the examiner notes that the first processor of claims 15-19 is interpreted to be the enhancement block 104 performed by the processor 302 and that the processing of graphics drawing commands in claim 15 is interpreted to be the adding of graphical elements to video frames performed by processor 302.

Claim Objections

1. The examiner fails to find support for the last limitation of amended claim 20 in Applicant's specification. In Applicant's remarks, the applicant has stated that claim 20 has been rewritten in independent form; however, the examiner notes that the last limitation has been amended to refer back to the first limitation of the claim. That is, the claim now recites the phrase “wirelessly sending *the* graphic drawing commands” (italicized for emphasis), referring back to the graphic drawing commands used to produce the rendered graphics image data that has been sent to the wireless monitor. Applicant's specification states that “[t]he above structures and methods provide a wireless monitor and system. Shadow rendering by wireless devices are provided wherein drawing commands are communicated wirelessly to avoid high bandwidth transmission of rendered pixel data to facilitate a wireless link between a monitor, for

example, and an image rendering source” (p. 23, lines 4-7 of Applicant’s specification). This suggests that graphics drawing commands are sent instead of rendered graphics image data, so that the receiver can render the graphics without actually having to send the graphics pixel data itself. This also makes logical sense, since the graphics drawing commands would not be needed by the receiver if the commands had already caused the graphics to be rendered and transmitted to the receiver. The examiner requests that Applicant provide the examiner with the appropriate passages supporting the amended claim.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims **15-20, 24-29** are rejected under 35 U.S.C. 102(e) as being anticipated by Hannah.

Referring to claim **15**, Hannah discloses a method for providing image data for a wireless monitor comprising:

- in a device:
 - o processing graphics drawing commands using a first processor to produce rendered graphics image data (enhancement block 104 adds graphical elements to video frames)(col. 2, l. 13-34, 49-56) and storing the rendered graphics image data to a frame buffer (the examiner notes that a frame buffer

is inherent to the enhancement block 104, since the enhancement block 104 derives motion vector hints and generates an enhanced image 114 based upon an enhancement made to an original image)(col. 2, l. 13-24, 50-67; col. 3, l. 1-67; col. 4, l. 1-67; col. 5, l. 1-67; col. 6, l. 58-64; col. 7, l. 29-48; & Figs. 4, 6);

- retrieving the rendered graphics image data from the frame buffer over a local bus using a second processor (encoder 106)(Fig. 1);
- encoding, by the second processor, the retrieved rendered graphics image data to produce encoded graphics image data (col. 2, l. 66-67; col. 3, l. 1-2, 5-16; & col. 7, l. 29-39); and
- sending the encoded graphics image data to a wireless monitor using a short range wireless transmitter (the examiner notes that a short range wireless transmitter and a short range wireless receiver are inherent to re-broadcasting MPEG-2 transmissions to remote displays without the need for a cable connection)(col. 2, l. 28-32; col. 3, l. 1-2, 5-16; col. 5, l. 46-53; & col. 9, l. 30-36).

Referring to claim **16**, Hannah discloses the method of claim 15, comprising:

- decompressing a compressed video stream to produce a decompressed video stream (col. 2, l. 20-22, 38-48);
- recompressing the decompressed video stream to produce a recompressed video stream (col. 2, l. 30-34; col. 3, l. 1-2, 5-16); and wherein sending the encoded graphics image includes sending the recompressed video stream using the short range

wireless transmitter (col. 2, l. 20-34, 66-67; col. 3, l. 1-2, 5-16; col. 4, l. 7-8; col. 5, l. 60-63; & col. 7, l. 29-63).

Referring to claim 17, Hannah discloses the method of claim 16, comprising:

- combining the rendered graphics image data with the decompressed video stream to produce frames of image data (col. 2, l. 13-67 & col. 3, l. 1-2, 5-16);
- storing the frames of image data in the frame buffer prior to recompressing (see examiner's note regarding the frame buffer in claim 10 above); and
- retrieving the frames of image data for recompression (col. 2, l. 66-67; col. 3, l. 1-2, 5-16; col. 7, l. 29-39).

Referring to claim 18, Hannah discloses the method of claim 15, comprising locally displaying the rendered graphics image data on a local display (col. 2, l. 35-48 & Fig. 1).

Referring to claim 19, Hannah discloses the method of claim 15, comprising:

- receiving, by the wireless display, a compressed video stream containing graphics and recompressed video (the examiner notes that this is inherent to Hannah, since it is required for reception of the transmitted graphics and video)(col. 2, l. 28-34; col. 3, l. 1-2, 5-16; & col. 5, l. 46-57);
- decompressing the received compressed video stream by the wireless display and producing decompressed image frames (the examiner notes that this is inherent to Hannah, since the received compressed video stream must be decompressed in order to view the content); and
- displaying the decompressed image frames on the wireless display (col. 5, l. 54-57).

Referring to claim **20**, Hannah discloses the method for providing image data for a wireless monitor comprising:

- in a device:
 - o processing graphics drawing commands using a first processor (decoder 102)(Figs. 1, 5, 6) to produce rendered graphics image data and storing the rendered graphics image data to a frame buffer (the examiner notes that a frame buffer is inherent to the enhancement block 104, since the enhancement block 104 derives motion vector hints and generates an enhanced image 114 based upon an enhancement made to an original image)(col. 2, l. 13-24, 50-67; col. 3, l. 1-67; col. 4, l. 1-67; col. 5, l. 1-67; col. 6, l. 58-64; col. 7, l. 29-48; & Figs. 4, 6);
 - o retrieving the rendered graphics image data from the frame buffer over a local bus using a second processor (encoder 106)(Fig. 1);
 - o encoding, by the second processor, the retrieved rendered graphics image data to produce encoded graphics image data (col. 2, l. 66-67; col. 3, l. 1-2, 5-16; col. 7, l. 29-39);
 - o sending the encoded graphics image data to a wireless monitor using a short range wireless transmitter (the examiner notes that a short range wireless transmitter and a short range wireless receiver are inherent to re-broadcasting MPEG-2 transmissions to remote displays without the need for a cable connection)(col. 2, l. 28-32; col. 3, l. 1-2, 5-16; col. 5, l. 46-53; & col. 9, l. 30-36); and

- wirelessly sending the graphic drawing commands to a short range wireless receiver (the examiner notes that Hannah discloses sending motion vectors describing the color, dimension, and motion of objects in a video stream and that some of these motion vectors could be unaffected motion vectors 118)(col. 3, l. 40-50; col. 4, l. 44-52; col. 6, l. 58-60; & col. 7, l. 40-51; & Fig. 2).

Referring to claim **24**, Hannah discloses a method for providing image data for a wireless monitor comprising:

- decompressing, by a first apparatus, a compressed video stream to produce a decompressed video stream (col. 2, l. 20-22, 38-48);
- recompressing the decompressed video stream to produce a recompressed video stream (col. 2, l. 30-34; col. 3, l. 1-2, 5-16);
- sending the recompressed video stream wirelessly and sending graphics drawing commands wirelessly to be processed remotely (the examiner notes that motion vectors are transmitted in the video stream and used in decoding and decompressing the video images. The examiner interprets these to be graphics drawing commands)(col. 2, l. 20-34, 66-67; col. 3, l. 1-2, 5-16, 36-40; col. 4, l. 7-8; col. 5, l. 60-63; & col. 7, l. 29-63).

Referring to claim **25**, Hannah discloses the method of claim 24 comprising:

- processing, by a second apparatus, wirelessly received graphics drawing commands to produce rendered graphics data (the examiner notes that this is inherent to Hannah,

since it is required for reception of the transmitted graphics and video)(col. 2, l. 28-34; col. 3, l. 1-2, 5-16; & col. 5, l. 46-57); and

- decompressing the recompressed video stream and combining the rendered graphics image data with the decompressed video stream to produce frames of image data (the examiner notes that this is inherent to Hannah, since the received compressed video stream must be decompressed in order to view the video and graphics content).

Referring to claims **26** and **27**, Hannah discloses a method/apparatus for processing graphics and video comprising:

- recompressing a received compressed video stream to produce a recompressed video stream (col. 2, l. 30-34; col. 3, l. 1-2, 5-16); and
- transmitting wirelessly said recompressed video stream with graphics drawing commands (the examiner notes that motion vectors are transmitted in the video stream and used in decoding and decompressing the video images. The examiner interprets these to be graphics drawing commands)(col. 2, l. 20-34, 66-67; col. 3, l. 1-2, 5-16, 36-40; col. 4, l. 7-8; col. 5, l. 60-63; & col. 7, l. 29-63).

Referring to claim **28**, Hannah discloses a method for providing image data for a wireless display comprising:

- receiving, via a short range wireless receiver, a recompressed video stream and graphics drawing commands (the examiner notes that this is inherent to Hannah, since it is required for reception of the transmitted graphics and video without a cable connection)(col. 2, l. 28-34; col. 3, l. 1-2, 5-16; & col. 5, l. 46-57);

- decompressing the received recompressed video stream to produce decompressed image frames and processing the wirelessly received graphics drawing commands to produce rendered graphics image data (the examiner notes that this is inherent to Hannah, since the received compressed video stream must be decompressed and processed in order to view the video and graphics content); and
- displaying the decompressed image frames and graphics image data on a local display (col. 5, l. 54-57).

Referring to claim **29**, Hannah discloses a wireless display system comprising:

- a first unit operative to:
 - o send graphics drawing commands to a short range wireless receiver using a short range wireless transmitter (the examiner notes that motion vectors are transmitted in the video stream and used in decoding and decompressing the video images. The examiner interprets these to be graphics drawing commands. The examiner further notes that a short range wireless transmitter and a short range wireless receiver are inherent to re-broadcasting MPEG-2 transmissions to remote displays without the need for a cable connection)(col. 2, l. 28-32; col. 3, l. 1-2, 5-16; col. 5, l. 46-53; & col. 9, l. 30-36); and
- a wireless display operative to:
 - o receive, via a short range wireless receiver, the recompressed video stream and graphics drawing commands (the examiner notes that this is inherent to Hannah, since it is required for reception of the transmitted graphics and video

without a cable connection)(col. 2, l. 28-34; col. 3, l. 1-2, 5-16; & col. 5, l. 46-57);

- decompress the received recompressed video stream to produce decompressed image frames and process the wirelessly received graphics drawing commands to produce rendered graphics image data (the examiner notes that this is inherent to Hannah, since the received compressed video stream must be decompressed and processed in order to view the video and graphics content); and
- display the decompressed image frames and graphics image data on a local display (col. 5, l. 54-57).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL VAN HANDEL whose telephone number is (571)272-5968. The examiner can normally be reached on 8:00am-5:30pm Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chris Kelley/
Supervisory Patent Examiner, Art Unit
2623

MVH